## REMARKS

The non-final Office Action mailed July 2, 2009 has been carefully considered. Reconsideration in view of the following remarks is respectfully requested.

### Rejection(s) Under 35 U.S.C. § 103(a)

Claims 1-3 stand rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Kaneko et al. (U.S. pat. no. 5,932,990, hereinafter, "Kaneko") and further in view of Baldwin et al. (U.S. pat. no. 6,583,603; hereinafter, "Baldwin"). Applicants respectfully traverse.

Claims 1 and 3 have been amended to recite, for example according to claim 1, "a switch that is provided with such function that disconnects said lithium ion battery from ***both of*** said DC power supply apparatus ***and*** said load device ***when the cell voltage of said lithium ion battery shows overcharging or over-discharging of said lithium ion battery***, or connects said lithium ion battery to ***both of*** said DC power supply apparatus ***and*** said load device in a normal state." (Emphasis added). The claims have also been amended to state that the charging path includes a lithium ion battery (or batteries), a charging current limiting circuit and a switch, and is connected to the DC power supply apparatus in parallel with the load device.

The switch (6) of the present invention as claimed disconnects or connects both of the DC power supply apparatus (2) and said load device (3). The switch (6) disconnects the lithium ion battery from both of the DC power supply apparatus (2) and the load device (3) when the cell voltage of said lithium ion battery shows overcharging or over-discharging of said lithium ion battery. This structure makes it possible to protect the lithium ion battery (1) from overcharging and over-discharing as described on page 7, line 19, *et seq.* of the specification. Further, when

the switch (6) disconnects the lithium ion battery (1) (or the charging path) from both of the DC power supply apparatus (2) and the load device 3, the DC power supply apparatus (2) can supply electric power to the load device (3).

In clear contrast, Kaneko merely disclose the charging control system in which the switch 2 disconnects or connects the batteries 1a to 1n only from or to the load 3. The charging power source 4 is adapted to be selectively connected to the battery array only when the battery array needs being charged. Thus, Kaneko fails to disclose any switch which can disconnect and connect the battery from both of the DC power supply apparatus and the load device to protect the battery from overcharging and over-discharging.

Baldwin also fails to disclose any switch which disconnect and connect the battery 14 from both of the DC power supply apparatus (rectifier 8) and the load device 10 to protect the battery 14 from overcharging and over-discharging. Baldwin merely discloses the rectifier 8 is equipped with a current limiting function which is normally provided with the rectifier.

When the current limiting function of Baldwin is combined with Kaneko's structure as suggested in the Office Action, the charging power unit 4 of Kaneko may have the current limiting function. In this case, however, there would be a possibility that the drive current to the load 3 from the batteries 1a to 1n is not sufficiently supplied after charging the batteries 1a to 1n and disconnecting the charging power unit 4 from the batteries with the switch 2 turn on, because of insufficient charging.

In this respect, the charing path of the present invention includes the charing current limiting circuit and the lithium ion battery and is connected in parallel with the DC power supply apparatus (2) and the load device (3) in a normal state. The charging current liming circuit can therefore supply sufficient power to the lithium ion battery while the DC power supply apparatus (2) sufficiently supplies a drive current to the load. No reasonable combination of Kaneko and Baldwin teaches or suggests these features.

**Conclusion**

In view of the preceding discussion, Applicants respectfully urge that the claims of the present application define patentable subject matter and should be passed to allowance.

If the Examiner believes that a telephone call would help advance prosecution of the present invention, the Examiner is kindly invited to call the undersigned attorney at the number below.

Please charge any additional required fees, including those necessary to obtain extensions of time to render timely the filing of the instant Response to Office Action, or credit any overpayment not otherwise credited, to our deposit account no. 50-3557.

Respectfully submitted,
Nixon Peabody LLP

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